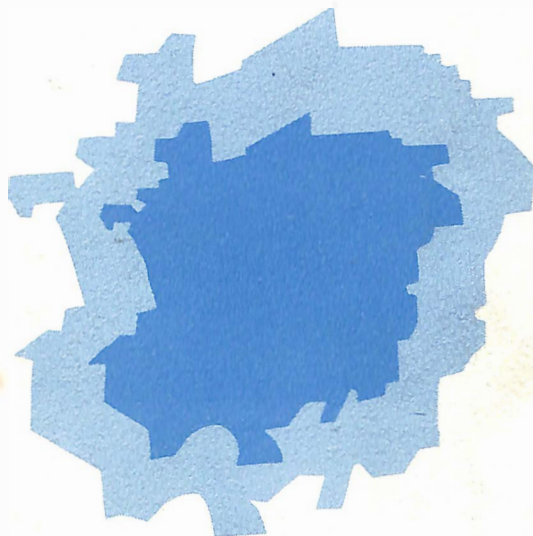
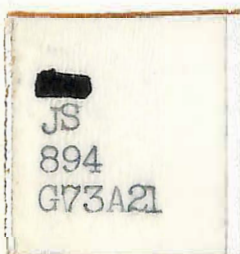


ANNEXATION



A Program for Growth



GREENSBORO, NORTH CAROLINA

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ANNEXATION: A PROGRAM FOR GROWTH

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Allan Johnston
Director of Planning

Charles E. Mortimore
Assistant Director of Planning
Responsible for Report Preparation

PLANNING DEPARTMENT, CITY OF GREENSBORO, NORTH CAROLINA
SEPTEMBER, 1968

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ANNEXATION: A PROGRAM FOR GROWTH

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PLANNING DEPARTMENT, CITY OF GREENSBORO, NORTH CAROLINA
SEPTEMBER, 1968

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September, 1968

Memo To: City Manager
From: Planning Department
Subject: Annexation Study

In response to a request dated February 10, 1967, from the City Manager's office, the Planning Department is pleased to transmit this report Annexation: A Program for Growth.

As stated in the request, the Department has undertaken "a major annexation study in depth, considering those areas which now or by 1970 will meet the prescribed statutory density requirements and which now or by 1970 will be served by water and sewer trunk facilities." Further, we have considered in the study the "characteristics of each area, needs of each area which annexation will supply, costs of full City services to each area, and anticipated revenues to the City from taxes and charges."

This report contains such an analysis, based on state law requirements, and the Planning Department's recommendations for an annexation program. In accordance with your request, this report and findings are being presented to the Planning Board for recommendation to City Council. Favorable action on the program will assure continuation of Greensboro's orderly growth.

Annexation and municipal growth are closely related under North Carolina law. Annexation is the primary method by which a city extends its corporate limits. It is, therefore, a tool which Greensboro can use to generate growth opportunities as well as meet growth problems.

Rapid urban growth often results in the formation of new municipalities, the proliferation of special service districts, and various other arrangements for providing public services and facilities. This fragmentation of political responsibility, overlapping functions and duplication of service systems is one of the major local governmental problems facing metropolitan areas today. Orderly expansion of cities through annexation

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City Manager
Page 2
September, 1968

has tended to minimize these and other growth problems. Initial deficit financial considerations usually accompanying annexation are over-shadowed by the elimination, or at least minimization, of these problems.

If Greensboro had not met its responsibility to provide a high level of urban services through annexation, it probably would be ringed today by a number of small municipalities. Each would be competing for a high revenue producing tax base; each would have its own political, administrative and service systems; and area-wide problems would be greater in scale.

Freezing the city limits will not stop urban growth, nor eliminate the need to serve that growth. Municipalities such as Greensboro must meet this challenge if they are to continue as viable governmental units.

The Planning Department appreciates the assistance of all City Departments and personnel who contributed so much to this study. Without their cooperation and effort it would have been impossible to complete. Appreciation is also extended to the Guilford County Planning and Tax Departments.

Allan Johnston
Director

AJ:jay

ACKNOWLEDGMENTS

The assistance of the following Departments in preparation of this study is gratefully acknowledged.

City of Greensboro

Finance Department

Fire Department

Legal Department

Police Department

Public Works Department

Traffic Engineering Department

Guilford County

Planning Department

Tax Department

TABLE OF CONTENTS

- I. LETTER OF TRANSMITTAL
- II. ACKNOWLEDGMENTS
- III. SUMMARY
- IV. INTRODUCTION
 - Greensboro's Growth: Past
 - Greensboro's Growth: Future
 - 1957 - 1968 Period
 - 1968 and Beyond
- V. LEGAL ASPECTS OF ANNEXATION
 - "New Law" Requirements
- VI. METHODOLOGY OF STUDY
 - Delineation of Study Areas
 - Cost-Revenue Data
 - Revenues
 - Costs
 - Observations on Cost Data
 - Water and Sewer Cost-Revenue Information
 - Costs
 - Revenues
 - The City-County Water and Sewer Agreement
- VII. THE ANNEXATION PROGRAM
 - Introduction
 - Annexation and Urban Growth
 - Scheduling Considerations
 - Proposed Annexation Program
- VIII. SPECIAL CONSIDERATIONS
- IX. CONCLUSION
- X. APPENDIX
 - Maps
 - Tables

SUMMARY

The annexation study presented in this report has involved the following major steps:

1. Investigation of annexation procedural requirements and City responsibilities as established by State Law.
2. Delineation of study areas as required by State Law.
3. An analysis of each area with respect to size, households, population, extent of urban services, urban service needs, development pressures, development capacity, probable development, need for annexation, and impact of annexation upon other governments and agencies.
4. A cost-revenue analysis including:
 - a. estimating costs of providing services;
 - b. estimating revenues; and,
 - c. determining fiscal resources available for annexation.
5. Scheduling an annexation program based upon urgency of need for urban services, city fiscal capabilities, and anticipated future annexations required to bring areas which exhibit or will exhibit urban characteristics into the City.

This study has devoted particular attention to water and sewer service questions, and to the relationship between annexation and the City-County water and sewer policy agreement. There is no question but that this agreement affects the timing of annexation. In many respects the agreement precludes the need for or the feasibility of immediate annexation of certain areas adjacent to the City. The major capital investment in these areas made or to be made by the County can be recouped within a few years--if the City waits to annex these areas.

Other special considerations relating to the proposed annexation program include:

- * 1. City responsibility to provide services--under the provisions of State Law, the City must provide basic services (police and fire protection, street maintenance, and sanitation) immediately upon annexation. Major water and sewer lines must be under contract and construction begun within 12 months after annexation. Therefore, an annexation program must be carefully scheduled within budget limitations.

2. Special legislative act to annex the Town of Guilford College--the Town of Guilford College encompasses 85 acres and 100 people. Its annexation can be accomplished only by a special act of the General Assembly which would authorize a merger of the Town with the City.
3. Fire District contracts--to avoid excessive delays in annexation (and to avoid construction of fire stations prior to annexation) the City should contract with the nearest adjacent fire district for fire protection of newly annexed areas (for the period between annexation and fire station construction). This is authorized by State law and was done in the 1957 annexation.
4. It is necessary that fire station construction be financed from bond funds. Two stations are presently needed; four are eventually required to provide effective service to areas presently within the corporate limits as well as areas proposed to be annexed. The analysis indicates that debt service revenue from the areas to be annexed will be sufficient to retire the fire station construction bonds for all four stations.
5. Street costs (paving, curb and gutter, and resurfacing improvements) would be scheduled in accordance with current City policy. Such improvements should be scheduled under existing capabilities of the Street and Sidewalk Revolving Fund and the State Highway Allocation Fund.

After review of these considerations and evaluation of the findings with other City departments, the Department recommends the annexation program reflected in the following table. The reader is referred to Maps 3 and 4 in the Appendix for identification of the areas and to the body of the report for a full explanation of this program.

PROPOSED ANNEXATION SCHEDULE

<u>AREA(s)</u>	<u>INTENT DATE</u>	<u>EFFECTIVE DATE</u>
2, 3, 4, 6, 7, 8, 9, 10, 11, part of 12, and 13*	November 18, 1968	June 28, 1969
18*	November 18, 1968	March 1, 1970
24, 25, 26, 27**	March, 1971	June, 1971
28, 29**	March, 1972	June, 1972
14, 15, 16, 17**	March, 1973	June, 1973
1**	March, 1974	June, 1974
19, 20, 21, 22, 23, and remainder of 12**	after 1975 or as development warrants	

* Definite action proposed

** Tentative schedule

The Department proposes to prepare an "Annual Annexation Report" in order that the City may be constantly aware of the extent of urban fringe development and service needs, and be able to schedule annexation on a regular basis within annual budgetary limitations.

~~*~~SUMMARY OF
STATE LAW
ANNEXATION PROCEDURE

Notice of Intent (Resolution)

- (a) Describe boundaries of the area
- (b) Fix date for public hearing (not less than 30 days and not more than 60 days following passage of resolution)

Notice of Public Hearing

- (a) Fix date, hour and place of public hearing
- (b) Describe boundaries clearly
- (c) State that report will be available at Clerk's office at least fourteen days prior to date of public hearing

Notice in newspaper once a week for four successive weeks prior to public hearing; period from date of first publication to date of last, both dates inclusive, shall be not less than twenty-two days, including Sundays, and date of the last publication shall be not more than seven days preceding the date of the public hearing

Action Prior to Hearing

At least fourteen days before date of public hearing the City Council approves the report and makes it available in Clerk's office (Summary may be prepared for public distribution.)

Public Hearing

Report explained and hearing held

Passage of Ordinance

No sooner than seven days and no later than 60 days after public hearing date. Effective date may be any time within 12 months from the date of passage of the ordinance.

ANNEXATION: A PROGRAM FOR GROWTH

INTRODUCTION

Greensboro's Growth: Past

Greensboro, since its beginning in 1808, has been characterized by steady and orderly population growth. Major annexations in 1923 and 1957 served as catalysts in the growth of the city.

According to Ethel S. Arnett, in her book Greensboro, North Carolina, The County Seat of Guilford, a legislative act was passed in 1807 moving the Guilford County seat to a more central point than the Martinville location. The following year 42 acres were purchased at the site, and the new county seat was named Greensboro in honor of General Nathanael Greene. During 1809 and 1810 the new town began to be settled. In 1810 a legislative charter was written for the Town of Greensboro. The original size of the Town was about one quarter of a mile square. By 1829, the year a local census was authorized by the town commissioners, there were 369 persons residing within the corporate limits. The tables and map indicated below reflect the rise of this small town of the early 1800's into today's urban area of over 145,000 persons.

Table 1 lists significant events in the corporate growth of Greensboro; Table 2 shows the population growth of the City; and Table 3 illustrates the land area growth of Greensboro. Growth through corporate limit expansion is shown on Map 1.

Greensboro's Growth: Future

As the tables illustrate, major growth periods of the City corresponded with expansion of the corporate limits. Through annexation important municipal services are provided to more persons and land, thus opening the way for further growth and expansion. If a city is to prosper and grow, it must plan for corporate expansion in response to urban service needs, the need for orderly peripheral development, and the need for room in which to grow--all within its financial ability to serve its citizens.

The purpose of this study is to assess Greensboro's growth since its last major annexation in 1957, delineate urban fringe areas which qualify for annexation under State law requirements and schedule an orderly annexation program. The program is based on urban service needs in the areas, the cost of providing such services, the revenues to be derived from the areas and the ability of the City to serve the areas.

1957 - 1968 Period

Prior to the major annexation of 1957, Greensboro was literally "busting out at the seams." The City was in need of developable land within its corporate limits. No major expansion of the City had occurred since 1923 and growing room was needed. Large developments were taking place on the fringe of the City, at least one of which (the Town of Hamilton Lakes) was incorporated. These circumstances spurred the City to a major annexation program which more than doubled the City's land area. It afforded the opportunity for the rapid growth which has occurred in the last ten years.

1968 and Beyond

Although the City is not cramped for space at the present, it is important that the "fringe area" be continually studied and brought into the City if urban service needs and development pressures warrant. Greensboro has planning, subdivision, zoning and code enforcement jurisdiction within the one-mile extra-territorial area. These regulations, coupled with the City-County water and sewer agreement, give the City control of development adjacent to the municipal boundary. In addition, they insure appropriate fringe development and reduce the City's financial liability at the time of annexation.

Annual study of this fringe development is essential to a continuing annexation program. The present study represents the beginning of such a program. An annual re-evaluation of fringe development will be made and the program updated as required. In this way, the City can prevent the situation which existed prior to the 1957 annexation--and plan for continued orderly growth.

LEGAL ASPECTS OF ANNEXATION

In North Carolina, procedures for annexation are explicitly outlined in the General Statutes. Areas must meet specific requirements before they can be annexed and specific steps must be followed in the process of annexation.

Municipal boundaries may be extended or altered under any one of three major procedures. The most fundamental, and probably the oldest procedure, is by an Act of the State Legislature. In addition to creating a municipal corporation, such an act may be used to modify or expand the boundaries of any existing municipality. Under the second procedure, a municipality may annex by ordinance any area contiguous to its

boundaries upon receipt of a petition signed by all owners of all real property within the area to be annexed. Legal procedures for a public hearing and passage of the ordinance are outlined in the General Statutes.

Greensboro's last major expansion through annexation took place in 1957, which was a special State act redefining the corporate limits. In 1959, the General Assembly enacted legislating amending, and thus changing, the requirements for annexation initiated by a municipality. This third procedure, known as the "New Law" method, has been the basis for this study. It sets forth specific criteria which must be followed by the municipality initiating an annexation program. Under this method the power to annex is vested in the municipality, and expansion is achieved by passage of an ordinance after numerous requirements are met. These requirements are reviewed below.

* "New Law" Requirements (G.S. § 160-453.15 to 453.23)

To be eligible for annexation, an area must be developed for urban purposes. This is defined as an area which has two persons per acre or the equivalent urban character as exemplified by certain land usage and platting. The area to be annexed must be contiguous to the city limits, and at least one-eighth of the aggregate external boundary of the area must coincide with the municipal boundary. No part of an area may be included within the boundary of another incorporated municipality.

In addition to areas developed for urban purposes, a municipal governing board may include in the area to be annexed any area which does not meet the urban purposes definition if such area either:

- (a) lies between the municipal boundary and an area developed for urban purposes so that the area developed for urban purposes is either not adjacent to the municipal boundary or cannot be served by the municipality without extending services and/or water and/or sewer lines through the sparsely developed area; or,
- (b) is adjacent, on at least sixty percent (60%) of its external boundary, to any combination of the municipal boundary and the boundary of an area or areas developed for urban purposes.

The procedure for annexation includes a Notice of Intent, Notice of Public Hearing, Public Hearing, and passage of an Annexation Ordinance. The Notice of Intent (resolution) must

describe the boundaries of the area and establish the date for the public hearing on the proposed addition. The date must be not less than thirty nor more than sixty days after passage of the resolution.

Prior to the public hearing, the municipality must prepare a report explaining its plans to extend services to the area to be annexed. The report must include:

- (1) A map or maps of the municipality and adjacent territory showing:
 - (a) the present and proposed city limits;
 - (b) the present major trunk water mains and sewer interceptors and outfalls, and the proposed extensions of such mains and outfalls; and
 - (c) the general land use pattern in the area to be annexed.
- (2) A statement showing that the area meets the requirements for annexation.
- (3) A statement setting forth the plans of the municipality for extending to the area to be annexed each major municipal service performed within the City at the time of annexation. Specifically, such plans shall:
 - (a) provide for extending police and fire protection, garbage collection and street maintenance services to the area on the date of annexation on substantially the same basis and in the same manner as such services are provided within the rest of the municipality. If a water distribution system is not available in the area, the plans shall call for reasonably effective fire protection services until water lines are made available in the area under existing municipal policies for the extension of water lines.
 - (b) provide for extension of major trunk water mains and sewer outfall lines into the area so that when such lines are constructed, property owners will have water and sewer service available to them under existing city policy for extending such service to individual lots or subdivisions.
 - (c) if extension of major trunk water mains and sewer outfall lines is necessary, set forth a proposed timetable for construction as soon as

possible following the effective date of annexation. The plans shall call for contracts to be let and construction to begin within twelve months following the effective date of annexation.

- (d) set forth the method under which the municipality plans to finance extension of services into the area to be annexed.

This report must be approved by the governing board of the municipality and be available for public inspection in the City Clerk's office at least fourteen days prior to the public hearing.

The Notice of Public Hearing must set the date, time and place of the hearing; describe the boundaries of the area in question; and state that the report explained above will be available at the City Clerk's office. The notice must be published as stipulated by law. At the hearing, a representative of the city explains the report, and all persons who wish to be heard have the opportunity to express their opinions.

Not earlier than seven days and not later than sixty days after the hearing the governing board may adopt an ordinance extending the city limits to encompass all or part of the area considered. The ordinance must describe the area by metes and bounds; prove that the area has met all the necessary requirements; state the municipality's intent to provide full services and its financial ability to do so by the date of annexation; and set the effective date of annexation for any time within twelve months from the date of passage of the ordinance. From the effective date of annexation the city absorbs the added territory, and the annexed area is subject to all the same taxes, regulations and privileges as the other parts of the municipality.

The "New Law" method requires that a city study in detail its fringe area to determine which areas qualify for annexation. This negates the arbitrary "grabbing" of land and results in an orderly, well-planned program of municipal expansion in response to urban service needs and the ability of the city to provide the services. Although State law does not require a cost-revenue analysis of the feasibility of annexation, this type of study should be an integral part of any annexation undertaking. The ability to finance the extension of services to new areas is an important consideration when scheduling and planning the annexation program. Such an analysis was made for each area and for certain groups of areas during this annexation study. The results of the cost-revenue analysis were considered in the scheduling of the annexation program which appears at the end of this report.

METHODOLOGY OF STUDY

Delineation of Study Areas

The first step in this study was to delineate all areas adjacent to the existing city limits which qualified for annexation under the State law requirements. This included surveying approximately 200 households on the fringe of the city to determine the average number of persons per household for the various areas under study. Land use information was updated, taking special note of residential development and listing every commercial and industrial establishment in each study area. Other data, such as street improvements, were recorded for use during later sections of the analysis.

After checking boundary contiguity, acreage and population density, twenty-nine study areas were delineated which met the basic State law requirements for annexation. These areas were outlined on 500 scale (1" = 500') zoning sheet maps, reflecting updated land use and improvements information for further use in the study. The original twenty-nine study areas are shown on Map 2. General data for each of these areas is presented in Table 4.

Ten of the study areas (1, 8, 15, 17, 18, 20, 22, 24, 27, 28) have at least two persons per acre and have at least one-eighth (or 12.5%) of their boundary contiguous to existing city limits. Eighteen of the areas (2, 3, 4, 6, 7, 9, 10, 11, 12, 13, 14, 16, 19, 21, 23, 25, 26, 29) have at least 60% of their boundary contiguous to any combination of existing city limits and the ten areas mentioned above. Area number 5 is the Town of Guilford College, which will require a special act of the State Legislature authorizing a merger with Greensboro if that area is to be annexed.

Cost-Revenue Data

The second step in the study, after area delineation, was to determine all tax revenues to be derived from each study area and estimate the City's cost to service each area. Revenues by source are presented first and costs by service or function are covered. Water and sewer service costs and revenues are reviewed in a separate section of the report.

Revenues

Both property and non-property tax revenue sources were considered. They include the following sources:

Property Taxes

Ad valorem

Non-Property Taxes

- Franchise
- Intangibles
- Privilege License
- Auto Tags
- Powell Bill
- Beer and Wine

1. Ad valorem tax

Assessed valuation of all real and personal property (residential and non-residential) within each study area was obtained from the records of the Guilford County Tax Department. The current tax rate (\$1.41 per \$100 assessed valuation) was applied to the total assessed valuation to derive the anticipated ad valorem tax revenue from each area. Table 5 shows the estimated revenue from this source.

2. Franchise tax

The franchise tax returned to the City by the State is based on a percentage of the gross utility receipts within the City. The figure is currently .75%. It will increase to 2% in 1969 and to 3% in 1970 as a result of legislation passed by the last General Assembly. Anticipated revenues per capita from this source are \$1.28 (1968), \$2.58 (1969), and \$4.65 (1970). The estimated franchise tax revenues from each area for these three fiscal years are shown in Table 6.

3. Intangibles tax

The intangibles tax is collected by the State and returned to the City based on a complex series of computations. Over the past five years, Greensboro has received approximately \$.90 of intangibles tax per \$1,000 of assessed valuation. This factor has been applied to the valuation of each study area, and the estimated revenues from this source appear in Table 7.

4. Privilege license tax

The amount of privilege license tax collected by the City is set forth in the Code of Ordinances for given types of businesses. A list of businesses in each area was compiled and the City tax collector was consulted as to the fee collectable from each establishment. Estimated revenues from the privilege license tax are shown in Table 7.

5. Auto tag fees

The City collects one dollar per auto tag. Every motorized vehicle is required to have such a tag or sticker displayed. The 1960 Census data was used to determine the average number of cars per household in the census tracts adjacent to each study area. This factor was applied to each study area to determine the revenue from this source. The ratio for each area is as follows: 1.5 cars per household (1-13); 1.3 cars per household (14-17; 24-29); 1.1 cars per household (18-23). Auto tag revenues are shown in Table 7.

6. Powell Bill funds

The City receives Powell Bill funds for street work from the State based upon City-maintained street mileage and population. The per-mile allocation is based on the mileage certified by the City each year. The per-capita allocation is based on the last decennial census figure. An increase in the per-capita allocation due to annexation will not be realized until 1971, following the 1970 Census. Per-mile and per-capita rates for the last ten years were obtained from the State Highway Commission. Trends were discerned and projections made of these rates for purposes of estimating Powell Bill Fund revenues for each area. These estimates appear in Table 8.

7. Beer and wine tax

Beer and wine tax revenues are received by the City based on the population at the last decennial census. Per-capita trends over the last several years were studied and projections made to 1971--the year when revenues would be received from this source following annexation. Estimated revenues from this source are shown in Table 7.

Costs

The second phase of the cost-revenue analysis was to determine the cost of providing basic municipal services to each study area. Services for which costs were estimated include the following:

Traffic Engineering (Signing and street lighting)

Sanitation (Garbage collection and street sweeping)

Police protection

Fire protection

Streets (Maintenance, resurfacing, paving, adding curb and gutter)

Department heads and supervisory personnel of each department responsible for providing a particular service were consulted. Basic unit of cost information was derived, and the basis for applying the costs was determined. This methodology and findings are summarized below.

1. Traffic Engineering

The Traffic Engineering Department is responsible for installing and maintaining traffic signals, street name signs and regulatory signs. Street lights are installed and maintained by Duke Power Company, and the City pays a certain fee per lamp to the utility company. Street name and regulatory signs cost \$35 per intersection for the first year. These signs are replaced on the average once every eight years at a cost of \$13 per intersection. Traffic signals cost \$250 per year to maintain. No new traffic signals beyond the existing five are required in the study areas for the foreseeable future. Street lighting costs approximately \$42 per year per intersection. Traffic Engineering service costs for each study area are shown in Table 9.

2. Sanitation

The Sanitation Division within the Department of Public Works is responsible for garbage and trash collection and street sweeping services. One garbage and trash crew serves about 900 houses. Commercial and retail establishments are also served, but industrial plants must provide their own service. The average cost to provide garbage and trash service is \$22 per year per house. The cost for commercial and retail service is \$27 per establishment. One garbage truck costs about \$9,000 and is replaced every seven years on the average. Street sweeping costs about \$75 per street-mile per year. There are only 1.75 miles of streets with curb and gutter in the twenty-nine study areas, resulting in a nominal cost for street machine cleaning. The cost of providing sanitation service in the study areas is shown in Table 10.

3. Police Protection

The Police Department estimated that two additional police patrol car beats would be required to provide adequate police protection to all study areas. The Department's estimate, covering all direct and indirect costs associated with establishing two additional beats, was \$126,388. Police Department personnel advised that the total cost figure for all study areas would be fairly accurate, but that individual area costs could fluctuate considerably dependent upon the scheduling of the annexation program and periodic patrol car beat reassignment. The total figure was apportioned among the twenty-nine areas on the basis of population. The cost for each study area is shown in Table 11.

4. Fire Protection

According to the most recent AIA survey, Greensboro maintains a Class III fire rating. The Fire Department was supplied information and a map for all study areas and asked to provide comments on the fire protection required for each area to maintain the Class III rating. These comments are reflected in Table 12. The Department also provided basic cost information on fire station construction, equipment, fire engines and company personnel. The fire protection costs are shown in three categories, for analysis purposes, as follows:

- a. annual operating cost of station and company - \$64,220 per station
- b. initial capital cost of engines and personal equipment - \$35,520 per station
- c. fire station construction, including land and furnishings - \$135,000 per station

An assumption was made that, as in the past, fire station construction would be financed through bond funds. This would require a bond issue referendum and possibly contracts with rural fire districts to provide protection in certain newly annexed areas until the required stations are built.

Fire protection costs were apportioned on the basis of population among the areas they would serve. The cost of station construction (bond funds) was amortized over twenty years, and the average cost per year for the first two or three years (\$12,500) was compared with the debt service revenues anticipated for each area served. This analysis shows that debt service revenues are sufficient to retire the bonds for fire station construction. Fire protection cost data are shown in Table 13.

5. Streets

Street maintenance and improvement services include the following: paved street maintenance, dirt street maintenance, resurfacing of paved streets, paving of dirt streets, and adding curb and gutter to and widening ribbon pavement streets. City costs for each of these items were obtained from the Public Works Department. The costs listed below are average costs per street-mile.

<u>Item</u>	<u>Cost</u>
Paved street maintenance ¹	\$ 500
Dirt street maintenance ²	2,350

Resurfacing ³	10,000
Paving ⁴	19,720
Adding curb and gutter, widening ⁵	59,440

¹Cost per mile per year; total cost borne by City

²Cost per mile per year; total cost borne by City

³Cost per mile; street usually resurfaced every 15 years; total cost borne by City

⁴Cost per mile; reflects net City cost after assessment return; assume added dirt streets paved over 15 year period

⁵Cost per mile; reflects net City cost after assessment return; assume added ribbon pavement improved over a 20 year period

Street costs for each area appear in Table 14. For purposes of analysis and presentation, the paved and dirt street maintenance costs are considered as annual operating costs. The cost of resurfacing, paving and adding curb and gutter are considered as programmed expenditures, because they are usually spread over a 15 to 20 year period. Street improvement work is initiated either through petition or on the basis of public necessity. Net City costs rather than total costs have been shown for paving and adding of curb and gutter because of the long time period over which these improvements are normally made. Costs have been computed on the basis of existing streets in each area.

Observations on Cost Data

The cost data, unlike the revenue figures, may vary considerably depending upon the character and location of the study areas recommended for the annexation program. Anticipated revenues are based on assessed valuation, per capita and per mile distributions and other factors which yield fairly accurate estimates of revenue. Costs have been projected on a per unit basis (i.e., per capita, per household, etc.). As was noted in the fire protection section, however, certain areas can be served at no increase in cost. The Police Department advised that their actual costs would depend entirely upon the location and character of the areas recommended for annexation to the City. The same is true for sanitation costs. Certain areas or parts of areas may be served by existing patrol car beats, sanitation crews or fire stations at little or no additional cost. Other areas may require the addition of new units to

provide a given service. Conversely, the new units may serve parts of the existing city as well as new areas to be annexed. The cost data for each study area presented in this report may change somewhat when a particular area is actually served. The projected figures do provide a basis for analysis of the "relative" cost-revenue situation in each area, however.

Table 15 shows a comparison of basic costs and revenues for each of the twenty-nine study areas. Initial capital costs include: signing (initial); sanitation (trucks); and fire protection (engines and equipment). Annual operating costs include: police and fire protection; street lighting; traffic signal maintenance; sanitation; and street maintenance. Total General Fund revenues include: \$1.06 portion of property tax levy and all non-property tax revenues, excluding Powell Bill funds and Beer and Wine taxes. Programmed expenditures include: paving (net city costs over 15 years); curb and gutter (net city costs over 20 years); and resurfacing (city costs over 15 years).

Thirteen of the study areas (2-11, 13, 26, 28) show a net surplus of General Fund revenues over annual operating expenses or in some cases, a near break-even situation. The remainder of the areas show a net deficit when these two figures are compared. Totals for all twenty-nine areas reflect a net deficit approaching \$190,000.

Water and Sewer Cost-Revenue Information

The Water and Sewer Fund operates on a self-supporting basis. Therefore, the cost-revenue information for this service activity is considered separately.

According to State law, a municipality must have major trunk water mains and sewer outfalls under construction within one year after the effective date of annexation. The cost of providing water and sewer service to the study areas was a major consideration in the overall scheduling of the annexation program.

Costs

Two major cost items were considered. They included the cost of the major water and sewer lines required by State law, and the cost of extending smaller lines to service individual properties. Major lines were considered as lines 12 inches and over for water and lines 8 inches and over for sewer. Based on past experience, it costs approximately \$500 per acre to extend smaller lines to individual properties in developing areas.

The Public Works Department prepared over-lay maps showing the proposed extension of major water and sewer lines to each

of the study areas. They also prepared cost estimates on these major lines and attendant facilities. Because of topographic features affecting sewer service particularly, it was necessary to show the costs for groups of areas or parts of areas in some cases. Existing or proposed lines under the City-County policy agreement were also taken into consideration. Major line costs are shown in Table 16.

Acres of developed land were determined from maps of the study areas. A development cost for each area was calculated using the \$500 per acre factor. Approximately 70% of the \$500 per acre is returned to the City through assessments over a five-year period beginning after the lines are in service. Experience has proven that these costs would have to be met during the first two or three years following the installation of major lines. Development costs are shown in Table 16.

Revenues

Water and sewer revenues are realized from the sale of these services. A number of connections exist in the study areas, through either the City-County agreement or through private developer arrangements with the City. Under existing City policy and ordinance provisions, these connections pay a rate which is twice the in-city rate. When present users are annexed, the City will lose one-half of the revenue from these connections. By subtracting the existing number of residential and non-residential connections from the total number of residential and non-residential locations, it was possible to determine the potential number of connections. An average annual water and sewer bill of \$65 was applied to the potential number of residential connections. The same procedure was used for potential commercial and industrial connections--the amount of the bill reflecting current charges for different types of such connections. The new revenue to be realized was adjusted by the amount to be lost when existing connections are annexed. The figure for new revenue assumes all potential connections, both water and sewer, from existing development are made and in service. The net revenue for each study area is shown in Table 16.

The City-County Water and Sewer Agreement

Since 1965, the City of Greensboro and Guilford County have extended City water and sewer service to areas outside the city limits on a contractual basis. Basically, the County, or a private individual or firm working through the County, finances a project and the City lets contracts for the construction. Recently the City and County adopted a new agreement. It does not affect the method of initiating and financing a project, but it does change appreciably the repayment procedure by the City to the County.

Under the old agreement, the City collected and gave to the County an acreage fee (water - \$350/acre; sewer - \$195/acre) or assessment fee (water - \$3.50/ft.; sewer - \$2.50/ft.), whichever was greater. Upon annexation, the City paid the County any assessment charges collected under in-city rates until the County recovered their cost, minus a depreciation factor.

A Water and Sewer Construction Fund has been set up under the new agreement. The fund receives acreage charges (\$200 per acre each for water and sewer), line assessments levied by the County, one-quarter of the service charges collected by the City, and a payment from the County equal to the City's contribution. Upon annexation, the City takes over the lines with no payment to the County, except to collect and deposit any outstanding assessments on existing lines.

The new agreement does not place any undue financial burden upon the City when annexing areas containing lines made available under the agreement. However, it does require that the City measure carefully any decision to annex such an area so as to not jeopardize the Construction Fund and the City-County agreement with respect to future extensions of water and sewer service.

The success of the first few projects under the new agreement will determine to a large extent the success and ability of the agreement to serve as a tool to guide and control urban growth; and thus, set the pattern for future municipal expansion. This factor was an important consideration in the scheduling of the annexation program, especially for those areas affected by the new agreement.

THE ANNEXATION PROGRAM

Introduction

Annexation at this point in Greensboro's growth differs in many respects from the situation which existed at the time of the 1957 annexation. First, of course, is that the annexation in 1957 was accomplished by a State act redefining the City's municipal boundary. The program now being contemplated must conform to the "New Law" method passed in 1959. It sets forth specific requirements which must be met in area delineation and the provision of services. Thus, the legislation requires a municipality to carefully study and plan its annexation program in light of urban fringe development, the service needs in a particular area and its financial capability to provide a level of services commensurate with the remainder of the City.

Second, the City in 1957 was in need of additional developable land. It had not expanded since 1923 and potential growth was stymied. This situation does not exist today and a program of annexation can prevent it from occurring in the future.

Third, the land added in 1957 mainly was developed with middle income subdivisions which, according to George Esser's Greensboro Suburban Analysis, more than "paid their own way" with respect to services. Sufficient vacant land to assure continued municipal growth was also added to the city. The areas under study at the present time do not reflect the general high density of development characteristic of the 1957 annexation. In addition, the present study shows that a majority of the areas will not return revenues sufficient to cover the cost of services--at least not for the first few years after annexation.

Fourth, the city limits in 1957 was set essentially at the natural drainage line (except at the southern boundary of Greensboro), which meant that few, if any, pumping stations were required to provide sewer service. Now, however, several of the areas under study require pumping stations which result in higher service costs.

Fifth, the City-County agreement on the extension of water and sewer lines outside the city limits was not in existence at the time of the 1957 annexation and, therefore, was not a consideration. As has been pointed out in the preceding section, however, this agreement has several ramifications for present and future annexations.

Annexation and Urban Growth

Annexation has long been considered as a means of controlling and guiding urban growth to the benefit of the municipal corporation. This was true when in 1957 Greensboro expanded its boundary to include vacant land to assure continued urban growth, within certain limits, in all directions around the City. With passage of the "New Law" method, this concept has changed somewhat (at least with respect to most North Carolina cities). The State law now requires that an area display an "urban character" before it is eligible for annexation. This means that, in most cases, a substantial amount of urban growth has taken place prior to annexation. Thus, annexation in and of itself is not as effective as it once was as a means of guiding urban growth.

Fortunately, Greensboro has alternative means available for controlling and guiding urban growth on its fringe. The State Legislature, being cognizant of urban growth problems,

granted Greensboro (as well as many other North Carolina cities) the authority to apply zoning, subdivision, inspections and certain other regulations in a one-mile extra-territorial zone around the City. Recently adopted amendments to the Greensboro Subdivision Regulations require a full level of improvements (exclusive of water and sewer improvements) in the one-mile area. This strengthens the City's control over new developments and will lessen the cost of future annexations. In addition, the City Council and Board of County Commissioners have agreed to stimulate and control orderly growth by approving the City-County policy agreement for water and sewer extensions. The new agreement should prove to be more conducive to residential development than the former policy; and thus an important instrument in guiding future development. The City Council, through judicious use of these controls, can effectively guide major urban development in the future. Annexation becomes basically, then, a procedure for expanding municipal boundaries in response to urban service needs, rather than a means of directing future urban growth per se.

Scheduling Considerations

Several factors were considered in assigning priorities to each of the areas and scheduling a proposed annexation program. These factors included:

- a. Urban service needs;
- b. Feasibility of servicing areas;
- c. Cost-revenue situation;
- d. City's fiscal capabilities;
- e. Major line and development costs for water and sewer service; and,
- f. Status of City-County agreement contracts for certain areas.

The Department also considered development pressures, probable development, the impact of annexation upon other governments and agencies, the configuration of the existing city limits, and anticipated future annexations required to bring areas which exhibit or will exhibit urban characteristics into the City.

Particular attention was devoted to the water and sewer service question--first with reference to costs, and secondly with reference to the status of contracts under the City-County

agreement. For example, the Public Works Department advised that approximately \$500,000 per year could be made available for water and sewer projects in annexed areas, beginning in the 1969-1970 fiscal year, without requiring a major bond issue for such improvements. This was a very important factor in scheduling the proposed program of annexation. The City-County agreement was a second important consideration. Past experience has shown that three to five years are required for the County to recover most of their costs from a project under the agreement. So as not to jeopardize the agreement or the Construction Fund, areas affected by such contracts have been scheduled with this in mind.

Slight alterations were required in the boundaries of three of the study areas following discussions with the Public Works Department on the general question of water and sewer service. Area 2 was enlarged to include a portion of the drainage in Area 1 not affected by the recent City-County agreement contract for lines to serve the northern half of Area 1. Area 1 was reduced by the amount added to Area 2. Both areas, after this adjustment, meet the State law requirements for annexation. A small tract of land on the northern boundary of Area 13 was eliminated because it cannot be served by an existing pump station, which will serve the remainder of Area 13. This reduced area also meets the legal requirements for annexation. Comparative data for each of these three areas before and after the boundary adjustments are shown in Table 17. All other areas were not affected by boundary changes. Cost and revenue data was adjusted to reflect the changes in Areas 1, 2, and 13.

Map 3 shows the twenty-nine study areas, reflecting the boundary alterations for areas 1, 2, and 13, as they were considered in scheduling the proposed annexation program.

Proposed Annexation Program

After considering all contingencies, the Planning Department recommends the following proposed annexation program for the City of Greensboro.

Definite action be taken to:

- Annex Areas 2, 3, 4, 6, 7, 8, 9, 10, 11, part of 12, and 13 effective in June of 1969.
- Initiate legislation in the next session of the North Carolina General Assembly seeking the merger of the Town of Guilford College with the City of Greensboro. We suggest that discussions begin immediately with officials of the Town of Guilford College in order that drafting of appropriate legislation may proceed.

- Annex Area 18 effective in March of 1970.

Tentative consideration be given to:

- Annex Areas 24, 25, 26, and 27 effective in June of 1971.
- Annex Areas 28 and 29 effective in June of 1972.
- Annex Areas 14, 15, 16 and 17 effective in June of 1973.
- Annex Area 1 effective in June of 1974.
- Areas 19, 20, 21, 22, 23 and the remainder of Area 12 are proposed to be annexed after 1975 or as development plans and developer financing of water and sewer service makes annexation feasible.

These area groupings and priorities are shown on Map 4.

Areas 2, 3, 4, 6, 7, 8, 9, 10, 11, part of 12, and 13 all have favorable cost-revenue ratios. Areas 2, 6, 8, 9 and 13 have developed to a point where they require a full level of urban services. The county has recovered most of their cost for water and sewer lines under the agreement contracts in Area 2. Areas 3, 4, 6, 7, 8, 9, 10, 11, part of 12, and 13 are wholly or partially surrounded by existing city limits, creating an illogical municipal boundary and special problems with respect to services and City-County jurisdiction.

Area 5, the Town of Guilford College, is almost completely surrounded by the City of Greensboro. The Town is approximately 85 acres in size with a population of 100 persons. It is providing few, if any, municipal services to its citizens and should benefit from a merger with Greensboro. As Greensboro continues to grow, the Town eventually will be encircled by the larger municipality--an impractical and undesirable situation.

Area 18, although it has an unfavorable cost-revenue ratio, is badly in need of municipal services--especially water and sewer. The cost of water lines to serve this area has been reduced somewhat by the previous commitment for major lines and feeder mains associated with the Lake Townsend Filter Plant. In addition, accelerated growth in this area and beyond toward Lake Townsend is anticipated upon completion of the reservoir and the major water supply line.

Areas 24, 25, 26, and 27 have unfavorable cost-revenue ratios, and urban service needs are not as great as Area 18. Therefore, these areas have been scheduled at the mid-point in the proposed annexation program.

Areas 28 and 29 have favorable cost-revenue ratios, although the urban service needs are not as great as Area 18. These areas are in the Sedgefield Sanitary District drainage area, but are not served by the District. City sewer service to these areas would involve double pumping and other considerations. Potential development and service problems require that this fringe area should be closely studied between now and the proposed annexation date.

Areas 14, 15, 16 and 17 have unfavorable cost-revenue ratios and are affected by a City-County agreement contract for water and sewer service immediately to the north of these areas. Such service will be available to these areas under the agreement as soon as the contract is approved.

Area 1 is also affected by an agreement contract which was recently approved. Its cost-revenue picture for General Fund services is a break-even situation.

Areas 14, 15, 16 and 17 and Area 1 are proposed for annexation at the end of the program schedule in order that the County and/or developer can recover a portion of their costs, thus assuring successful continuation of the new City-County agreement. Areas 14, 15, 16 and 17 have been scheduled for annexation prior to Area 1, primarily because of the need for urban services, the effect the water-sewer agreement has on these areas, and development potential.

Areas 19, 20, 21, 22, 23 and the remainder of Area 12 are recommended for annexation after 1975 or as development, and/or developer financing of water and sewer service, makes annexation feasible. Areas 19 and 12 have little pressure for development at the present time. Areas 20, 21, 22 and 23 as a group are in need of urban services, but are costly and impractical to serve. For example, Area 22 is divided by a drainage ridge line which necessitates two lift stations and double pumping for this group of areas. In addition, an inadequate existing pumping station and inadequate existing lines complicate the service problems. Indefinite development potential was also a factor in the scheduling of these areas.

As was mentioned earlier, the availability of approximately \$500,000 per year for water and sewer line construction beginning in the 1969-1970 fiscal year was an important consideration in the scheduling of the annexation program.

The proposed schedule outlined previously for each study area is shown in Table 18. The Department recommends that definite action be taken to annex Areas 2, 3, 4, 6, 7, 8, 9, 10, 11, part of 12, 13, 18 and the Town of Guilford College

between now and 1970. Council meeting dates are shown for passage of the Resolution of Intent and suggested effective dates of annexation are indicated for these areas. Annexation of the Town of Guilford College will require action by the State Legislature in the 1969 session.

The Department further recommends that consideration be given to annexing the remaining study areas according to the earlier proposed schedule. Approximate timing for Council intent action and effective dates for these areas are also shown in Table 18.

Table 19 contains a detailed schedule by date of all steps required to annex the areas recommended for action between now and 1970. The City Attorney has confirmed that this schedule meets all State law procedural requirements.

Major costs and revenues to be realized have been programmed over the period from 1968 to 1980 in accordance with the proposed annexation schedule. This data was tabulated by fiscal year for the areas as they are scheduled for annexation. Major costs and revenues (initial capital costs, annual operating costs, General Fund revenues, etc.) were totalled for each fiscal year to illustrate the financial impact of the annexation schedule over the next several years. This summary of costs and revenues appears in Table 20. Detailed cost-revenue information for each of the twenty-nine study areas and data on which this table is based are available in the Planning Department office.

Special Considerations

It is important to realize that the schedule for annexation after 1970 is tentative only at this time. The proposed program presented in this report has been based on existing conditions and factors pertinent to each area. These may change substantially during the next two to five years, requiring a complete restudy and new delineation of areas eligible for annexation.

Fire protection must be available to the areas on the effective date of annexation. To avoid excessive delays in annexation (and to avoid construction of fire stations prior to annexation), it is recommended that the City contract with the nearest adjacent rural fire district for protection of newly annexed areas until such time as stations are built and a water supply is available. This procedure has been authorized by State law and was followed in the 1957 annexation. It would involve contracts with the Guilford College Fire District (#17) for protection of Area 2 and the Rankin Fire District

(#13) for the protection of Area 18. The Department recommends that negotiations on these contracts begin as soon as possible after the annexation program is approved.

As in the past, fire station construction should be financed from bond funds. Four new stations are needed to serve all twenty-nine areas. Two will be needed immediately to serve the areas proposed for annexation by 1970. All four are eventually required to provide effective protection to areas presently within the corporate limits as well as the areas proposed for annexation by 1974. The analysis indicates that debt service revenue from the areas to be annexed will be sufficient to retire the bonds for all four stations. The City should immediately take steps to provide for the authorization of bonds sufficient to construct four new fire stations.

Under the provisions of State law, the City must provide basic services (police and fire protection, street maintenance, sanitation) immediately upon annexation. Water and sewer lines must be under contract and construction begun within 12 months after annexation. In order to meet these requirements, the Public Works Department, Police Department, Fire Department and Traffic Engineering Department should take immediate steps to plan for the provision of their particular services to the areas to be annexed according to the approved program. These efforts should be coordinated through the City Manager's office and the Planning Department in order that pertinent information will be available for incorporation in the report required by State law.

Street improvements (paving, curb and gutter, and resurfacing) should be scheduled in accordance with existing City policy. Petition and public necessity street improvements for each area annexed should be programmed under existing capabilities of the Street and Sidewalk Revolving Fund and the State Highway Allocation Fund to handle such improvements.

The Town of Guilford College can be annexed only through a merger with the City of Greensboro. Negotiations resulting in legislation to this end should be initiated with officials of the Town upon approval of the annexation program.

CONCLUSION

The annexation study and the recommendations presented in this report have been based on the best current information available. Every effort was made to update data and information as important changes took place during the course of the study. For example, the City tax rate increased from \$1.27 to \$1.41; three study areas were affected by petition annexations; and

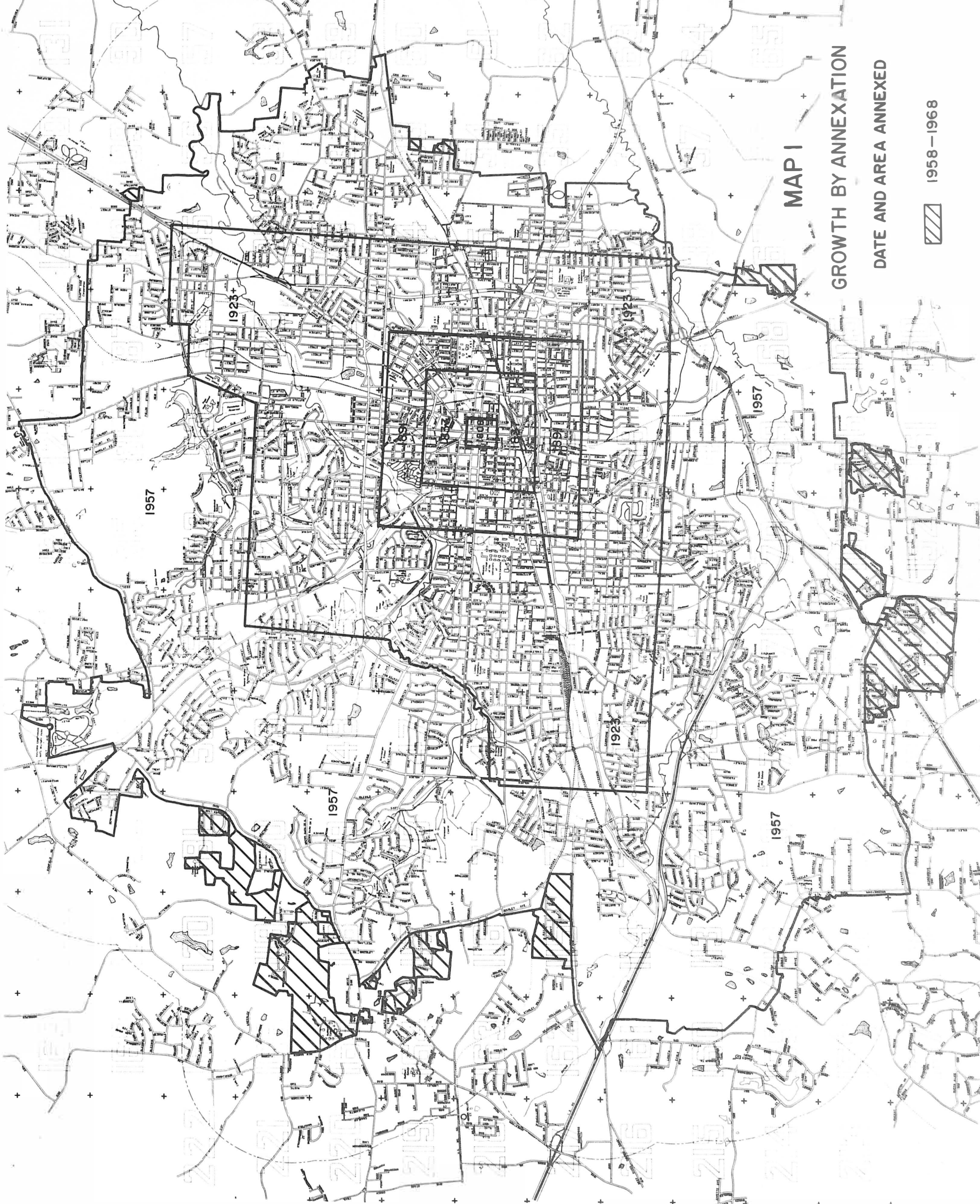
some areas were changed based on water and sewer service implications. These factors were considered throughout the study, and appropriate adjustments were made as required.

One procedure, that of garbage and trash collection, was altered during the final writing of this report. It was not possible to make the necessary adjustments to reflect this change. However, the City's Sanitation Division has advised that only minor cost reductions would be made in the data for each study area. Therefore, this change would have no appreciable affect on existing cost data.

This study has pointed out the need for the City to continually study and update data concerning its fringe areas. This is required for future annexation programs as well as for several other planning functions and programs. The areas tentatively scheduled for annexation after 1970 are subject to changing conditions which may alter completely the recommended schedule. The Department therefore proposes to prepare an "Annual Annexation Report". Through this means the administration and City Council will be informed of the extent of urban fringe development and service needs. This should prove to be invaluable in updating the proposed annexation schedule after 1970 and programming future annexations within annual budget considerations.

Stahlberg

APPENDIX



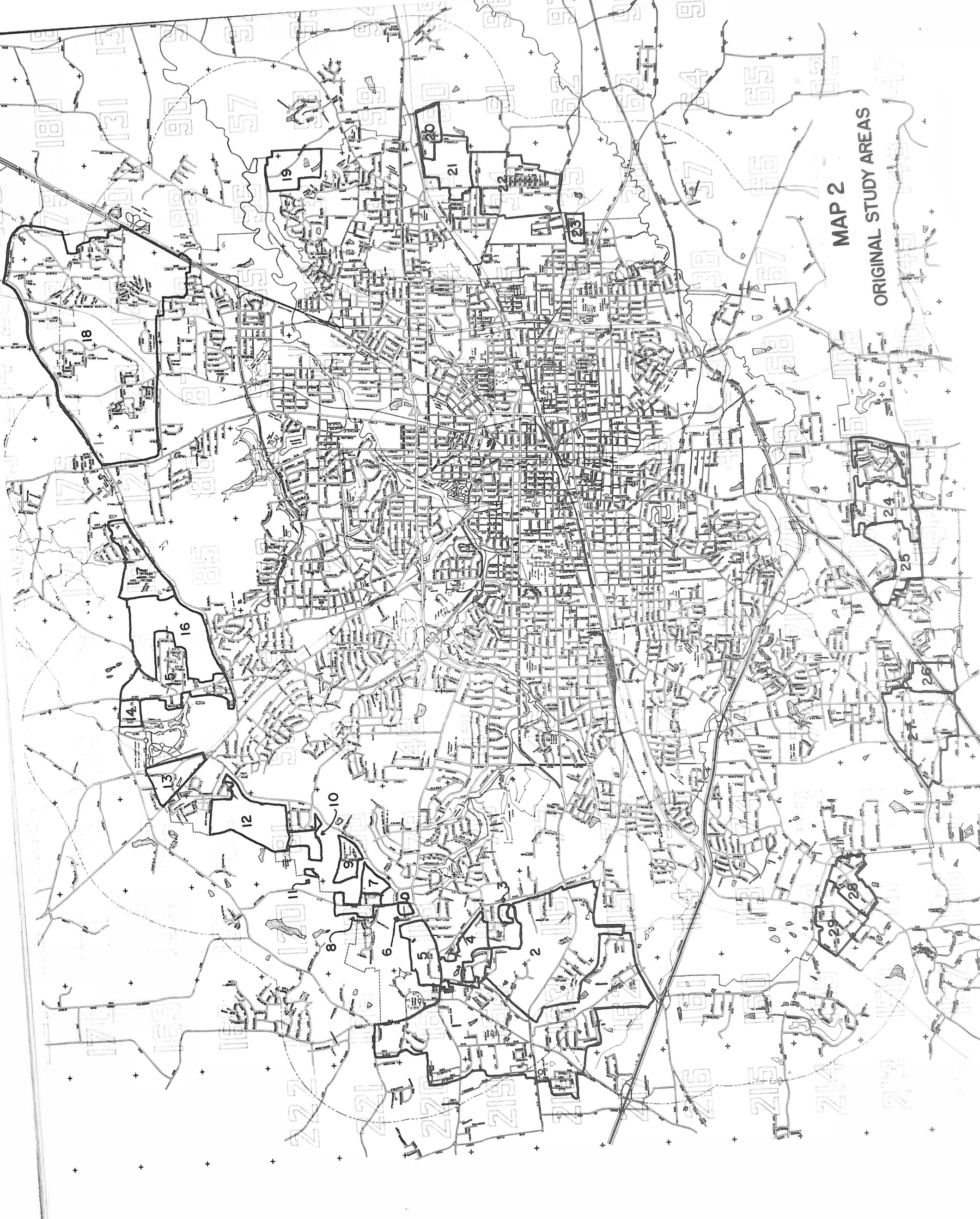
MAP 1

GROWTH BY ANNEXATION

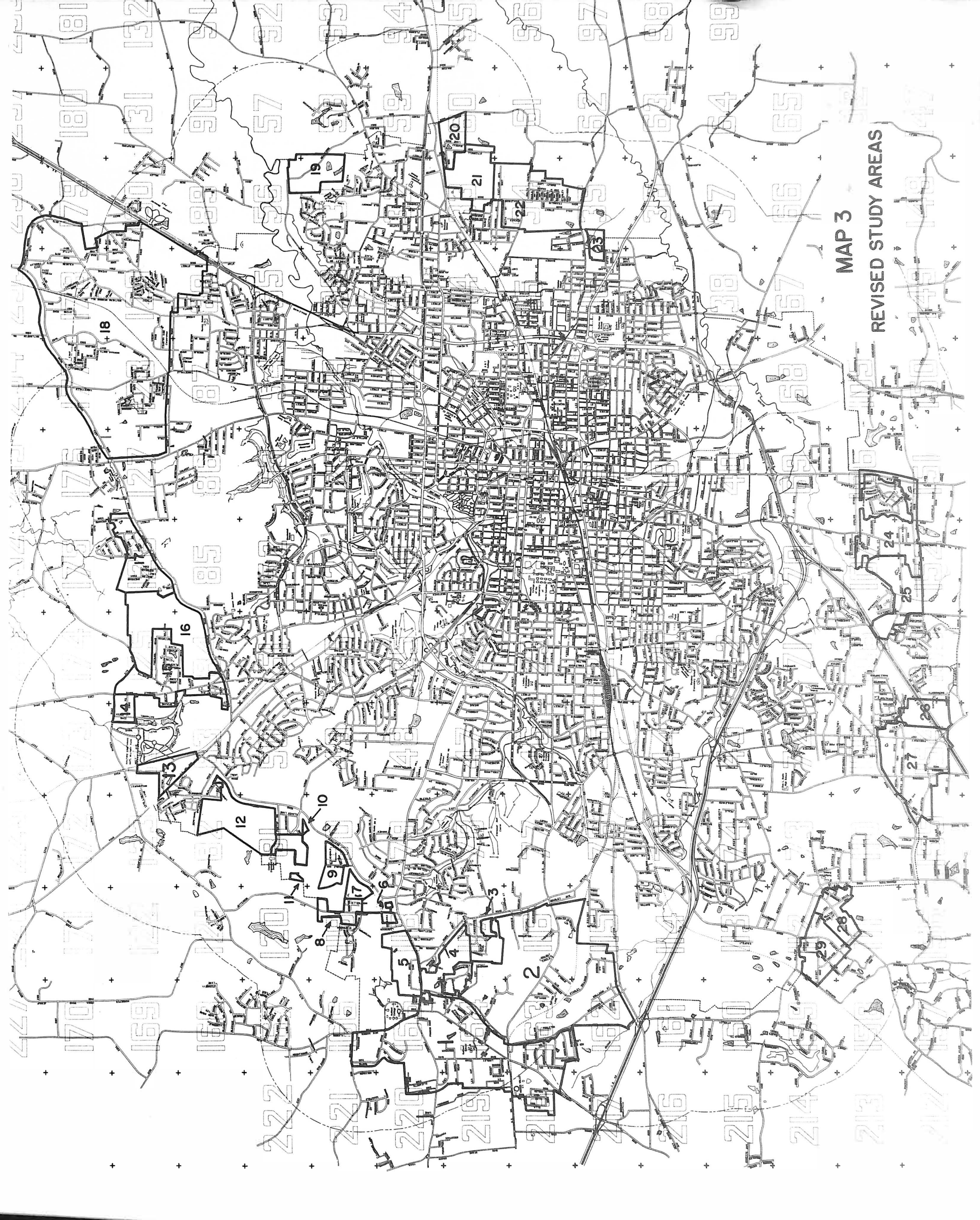
DATE AND AREA ANNEXED

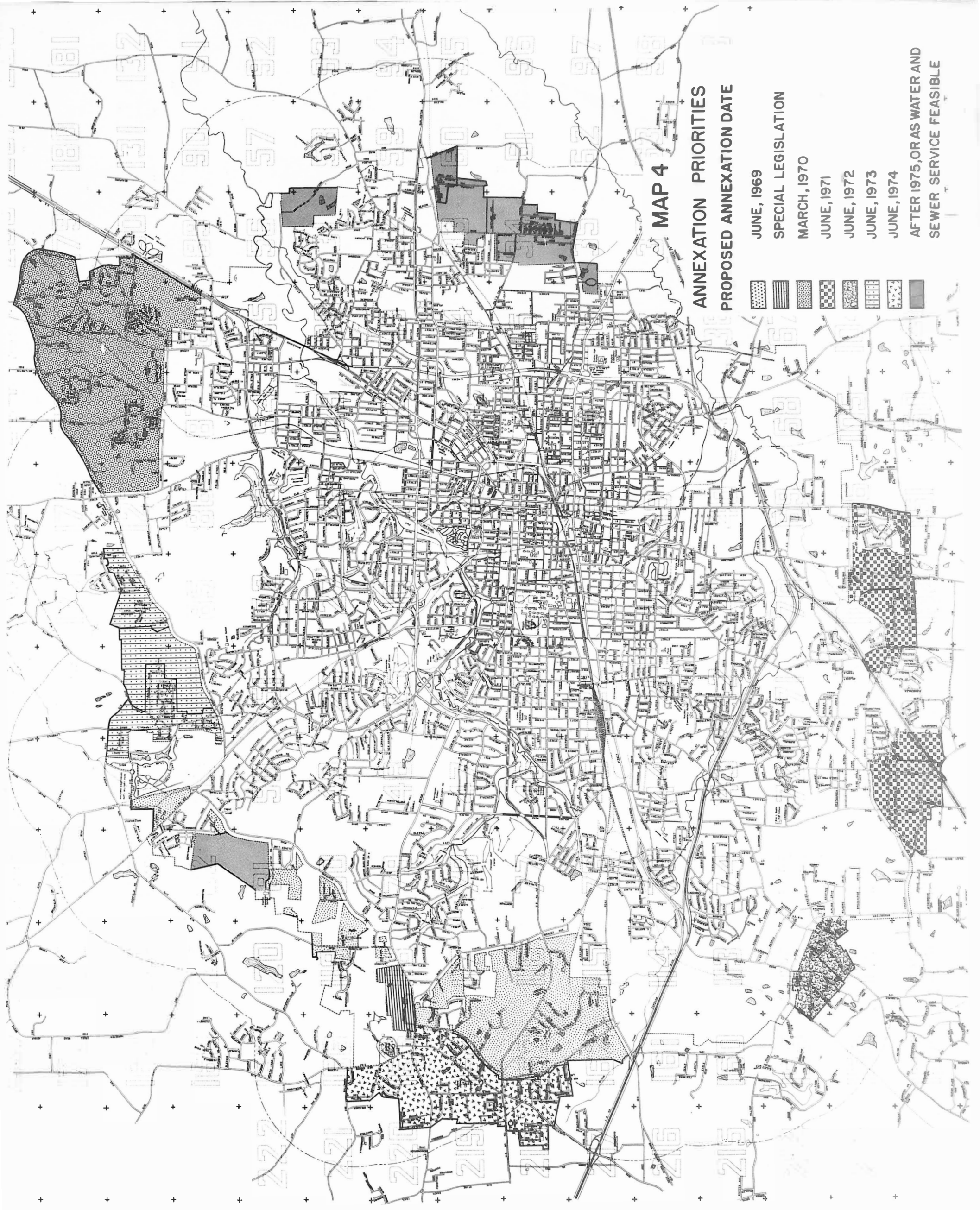


1958—1968



MAP 2
ORIGINAL STUDY AREAS





MAP 4

ANNEXATION PRIORITIES

PROPOSED ANNEXATION DATE

- JUNE, 1969
- SPECIAL LEGISLATION
- MARCH, 1970
- JUNE, 1971
- JUNE, 1972
- JUNE, 1973
- JUNE, 1974
- AFTER 1975, OR AS WATER AND SEWER SERVICE FEASIBLE

Table 1

SIGNIFICANT EVENTS¹

<u>YEAR</u>	<u>EVENT</u>
1807	Legislative act was passed creating Greensboro
1808	42 acres of land was purchased for the site of Greensboro
1810	Legislative charter was written for the Town of Greensboro
1837	The municipality of Greensboro was granted a new charter and enlarged to one square mile
1870	The Town of Greensboro became the City of Greensboro (new charter)
1891	City of Greensboro was enlarged to four square miles (charter amendment)
1921	Council-Manager form of government was inaugurated
1923	Greensboro became so-called Greater Greensboro when enlarged to 17.84 square miles by act of legislature
1957	Greensboro enlarged to 49.58 square miles through major annexation
1959	New charter for City of Greensboro was ratified

¹Source: Greensboro, North Carolina, The County Seat of Guilford, by Ethel S. Arnett, 1955.

Table 2
POPULATION GROWTH

<u>YEAR</u>	<u>POPULATION</u>
1829	369
1850	1,500
1880	2,105*
1890	3,317
1900	10,035
1910	15,895
1920	19,861
1930	53,569
1940	59,319
1950	74,389
1960	119,574
1961	122,820*
1962	126,070*
1963	129,320*
1964	132,570*
1965	135,820*
1966	139,070*
1967	142,320*
1968	145,380*

*Planning Department estimates

Table 3

LAND AREA GROWTH

<u>YEAR</u>	<u>LAND AREA IN SQUARE MILES</u>
1808	.066
1837	1.00
1891	4.00
1923	17.84*
1953	18.53
1954	18.59
1955	19.57
1956	21.02
1957	49.58*
1958	49.60
1959	49.68
1960	49.95
1961	50.39
1962	51.39
1963	51.40
1964	51.68
1965	51.73
1966	51.93
1967	51.94

*Major annexations

Table 4

CHARACTERISTICS AND POPULATION OF EACH AREA

<u>AREA</u> ¹	<u>ACREAGE</u> ²	<u>DWELLING UNITS</u>	<u>PERSONS PER DWELLING UNIT</u>	<u>PRESENT POPULATION</u>	<u>PERSONS PER ACRE</u> ²	<u>% CONTIGUITY</u> ²
1	1,288	795	3.73	2,965	2.30	29.2
2	705	197	3.73	735	1.04	100
3	44	1	3.73	4	.09	100
4	66	7	3.73	26	.39	100
5	85	27	3.73	101	1.19	100
6	11	5	3.73	19	1.73	100
7	31	0	3.73	0	0	100
8	59	38	3.73	142	2.41	62.4
9	52	12	3.73	45	.87	100
10	56	1	3.73	4	.07	87.5
11	12	0	3.73	0	0	67.5
12	196	5	3.73	19	.10	68.9
13	97	21	3.73	78	.80	73.9
14	32	11	3.73	41	1.28	73
15	255	216	3.73	806	3.16	40.4
16	328	6	3.73	22	.07	81.6
17	162	88	3.73	328	2.03	35.2
18	1,833	1,066	3.47	3,699	2.02	36
19	111	30	3.47	104	.94	67.7
20	61	39	3.40	133	2.18	32.2
21	165	21	3.40	71	.43	77.2
22	322	242	3.40	823	2.56	36.3
23	36	0	3.40	0	0	73.7
24	228	157	3.06	480	2.11	58
25	178	30	3.06	92	.52	86.5
26	81	10	3.53	35	.43	79.1
27	318	211	3.53	745	2.34	49.5
28	99	80	3.53	282	2.85	43.9
29	136	42	3.53	148	1.09	61.6
	7,047 (11.01 sq. mi.)	3,358	varied	11,947	varied	varied

¹All areas meet the density and contiguity requirements or only the contiguity requirements for annexation.

²These figures are subject to modification pending detailed boundary survey of each area prior to actual annexation.

Table 5

AD VALOREM TAX REVENUES

<u>AREA</u>	<u>ASSESSED VALUATION</u>	<u>GENERAL FUND (\$1.06)</u>	<u>DEBT SERVICE (\$.21)</u>	<u>PARKS AND RECREATION (\$.10)</u>	<u>LIBRARY (\$.04)</u>	<u>TOTAL (\$1.41)</u>
1	\$ 8,823,711	\$ 93,531	\$ 18,529	\$ 8,824	\$ 3,530	\$124,403
2	5,892,802	62,464	12,375	5,893	2,357	83,089
3	14,492	154	30	14	6	204
4	65,461	694	137	65	26	923
5	594,148	6,298	1,248	594	238	8,377
6	35,943	381	75	36	14	507
7	43,535	461	91	44	17	614
8	570,987	6,052	1,199	571	228	8,051
9	179,657	1,904	377	180	72	2,533
10	70,498	747	148	70	28	994
11	9,360	99	20	9	4	132
12	62,544	663	131	63	25	882
13	525,324	5,568	1,103	525	210	7,407
14	97,985	1,039	206	98	39	1,382
15	3,168,935	33,591	6,655	3,169	1,268	44,682
16	77,099	817	162	77	31	1,087
17	361,022	3,827	758	361	144	5,090
18	7,317,215	77,562	15,366	7,317	2,927	103,173
19	112,960	1,197	237	113	45	1,593
20	88,255	936	185	88	35	1,244
21	33,570	356	70	34	13	473
22	1,494,417	15,841	3,138	1,494	598	21,071
23	0	0	0	0	0	0
24	1,467,050	15,551	3,081	1,467	587	20,685
25	220,168	2,334	462	220	88	3,104
26	784,440	8,315	1,647	784	314	11,061
27	1,539,463	16,318	3,233	1,539	616	21,706
28	1,161,295	12,310	2,439	1,161	465	16,374
29	491,460	5,209	1,032	491	197	6,930
	<u>\$35,303,796</u>	<u>\$374,219</u>	<u>\$74,134</u>	<u>\$35,301</u>	<u>\$14,122</u>	<u>\$497,776</u>

Table 6

FRANCHISE TAX REVENUES

<u>AREA</u>	<u>POPULATION</u>	<u>1968-1969</u> ¹	<u>1969-1970</u> ²	<u>1970-1971</u> ³
1	2,965	\$ 3,795	\$ 7,650	\$13,787
2	735	941	1,896	3,418
3	4	5	10	19
4	26	33	67	121
5	101	129	261	470
6	19	24	49	88
7	0	0	0	0
8	142	182	366	660
9	45	58	116	209
10	4	5	10	19
11	0	0	0	0
12	19	24	49	88
13	78	100	201	363
14	41	52	106	191
15	806	1,032	2,079	3,748
16	22	28	57	102
17	328	420	846	1,525
18	3,699	4,735	9,543	17,200
19	104	133	268	484
20	133	170	343	618
21	71	91	183	330
22	823	1,053	2,123	3,827
23	0	0	0	0
24	480	614	1,238	2,232
25	92	118	237	428
26	35	45	90	163
27	745	954	1,922	3,464
28	282	361	728	1,311
29	148	189	382	688
	<u>11,947</u>	<u>\$15,291</u>	<u>\$30,820</u>	<u>\$55,553</u>

¹\$1.28 per capita²\$2.58 per capita³\$4.65 per capita

Table 7

<u>AREA</u>	<u>INTANGIBLES TAX¹</u>	<u>PRIVILEGE LICENSE TAX</u>	<u>AUTO TAG REVENUE</u>	<u>BEER AND WINE TAX²</u>
1	\$ 7,941	\$1,955	\$1,193	\$ 4,744
2	5,304	633	296	1,176
3	13	0	2	6
4	59	0	11	42
5	535	350	41	162
6	32	0	8	30
7	39	0	0	0
8	514	0	57	227
9	162	0	18	72
10	63	0	2	6
11	8	0	0	0
12	56	0	8	30
13	473	250	32	125
14	88	268	14	66
15	2,852	85	281	1,290
16	69	0	8	35
17	325	0	114	525
18	6,585	998	1,173	5,918
19	102	0	33	166
20	79	0	43	213
21	30	50	23	114
22	1,345	205	266	1,317
23	0	0	0	0
24	1,320	410	204	768
25	198	15	39	147
26	706	0	13	56
27	1,386	160	274	1,192
28	1,045	1,025	104	451
29	442	0	55	237
	<u>\$31,771</u>	<u>\$6,404</u>	<u>\$4,312</u>	<u>\$19,115</u>

¹ \$.90 per \$1,000 assessed valuation

² \$1.60 per capita (beginning in 1971)

Table 8

POWELL BILL FUNDS

<u>AREA</u>	<u>STREET MILES</u>	<u>REVENUE (MILES)</u>			<u>REVENUE (POPULATION) BEGINNING IN 1971 ⁴</u>
		<u>1968¹</u>	<u>1969²</u>	<u>1970³</u>	
1	16.34	\$8,988	\$9,150	\$8,906	\$9,192
2	3.65	2,008	2,044	1,989	2,279
3	0	0	0	0	12
4	0	0	0	0	81
5	.45	248	252	245	313
6	.17	94	95	93	59
7	0	0	0	0	0
8	.90	495	504	491	440
9	.46	253	258	251	140
10	.17	94	95	93	12
11	0	0	0	0	0
12	0	0	0	0	59
13	.40	220	224	218	242
14	.40	220	224	218	127
15	4.32	2,376	2,419	2,354	2,499
16	0	0	0	0	68
17	2.28	1,254	1,277	1,243	1,017
18	19.47	10,709	10,903	10,611	11,467
19	.46	253	258	251	322
20	.53	292	297	289	412
21	.63	347	353	343	220
22	3.89	2,140	2,178	2,120	2,551
23	0	0	0	0	0
24	1.62	891	907	883	1,488
25	1.27	699	711	692	285
26	.32	176	179	174	109
27	3.82	2,101	2,139	2,082	2,310
28	.95	523	532	518	874
29	2.01	1,106	1,126	1,095	459
64.51		\$35,484	\$36,125	\$35,158	\$37,037

¹ \$550 per mile² \$560 per mile³ \$545 per mile⁴ \$3.10 per capita

Table 9

TRAFFIC ENGINEERING COSTS

<u>AREA</u>	<u>NUMBER OF INTERSECTIONS</u>	<u>TRAFFIC SIGNALS</u>	<u>STREET LIGHT COST ¹</u>	<u>SIGNING COST (INITIAL) ²</u>	<u>SIGNING COST (8 YRS.) ³</u>	<u>TRAFFIC SIGNAL MAINTENANCE COST ⁴</u>
1	94	3	\$ 3,948	\$ 3,290	\$1,222	\$ 750
2	17	0	714	595	221	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	1	0	42	35	13	0
6	1	0	42	35	13	0
7	0	0	0	0	0	0
8	2	0	84	70	26	0
9	2	0	84	70	26	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	2	0	84	70	26	0
13	4	0	168	140	52	0
14	2	0	84	70	26	0
15	24	0	1,008	840	312	0
16	1	0	42	35	13	0
17	9	0	378	315	117	0
18	120	1	5,040	4,200	1,560	250
19	1	0	42	35	13	0
20	7	0	294	245	91	0
21	3	0	126	105	39	0
22	29	0	1,218	1,015	377	0
23	0	0	0	0	0	0
24	14	0	588	490	182	0
25	2	0	84	70	26	0
26	2	0	84	70	26	0
27	14	1	588	490	182	250
28	15	0	630	525	195	0
29	8	0	336	280	104	0
	374	5	\$15,708	\$13,090	\$4,862	\$1,250

¹ \$42 per intersection per year

² \$35 per intersection

³ \$13 per intersection

⁴ \$250 per year

Table 10

SANITATION COSTS

<u>AREA</u>	<u>NUMBER OF HOUSES</u>	<u>NUMBER OF BUSINESSES</u>	<u>SERVICE COST</u>	<u>TRUCK COST</u>
1	795	44	\$18,678	\$ 8,390
2	197	11	4,631	2,080
3	1	0	22	10
4	7	0	154	70
5	27	5	729	320
6	5	0	110	50
7	0	0	0	0
8	38	0	836	380
9	12	0	264	120
10	1	0	22	10
11	0	0	0	0
12	5	0	110	50
13	21	4	570	250
14	11	4	350	150
15	216	4	4,860	2,200
16	6	0	132	60
17	88	1	1,963	890
18	1,066	39	24,505	11,050
19	30	0	660	300
20	39	0	858	390
21	21	2	516	230
22	242	9	5,567	2,510
23	0	0	0	0
24	157	15	3,859	1,720
25	30	2	714	320
26	10	0	220	100
27	211	5	4,777	2,160
28	80	16	2,192	960
29	42	0	924	420
	<u>3,358</u>	<u>161</u>	<u>\$78,223</u>	<u>\$35,190</u>

Table 11

POLICE COSTS

<u>AREA</u>	<u>POPULATION FACTOR</u>	<u>POLICE PROTECTION COST</u>
1	.248	\$ 31,344
2	.062	7,836
3	.0003	38
4	.002	253
5	.008	1,011
6	.002	253
7	0	0
8	.012	1,516
9	.004	505
10	.0003	38
11	0	0
12	.002	253
13	.007	884
14	.003	379
15	.067	8,468
16	.002	253
17	.027	3,412
18	.310	39,180
19	.009	1,137
20	.011	1,390
21	.006	758
22	.069	8,721
23	0	0
24	.040	5,056
25	.008	1,011
26	.003	379
27	.062	7,836
28	.024	3,033
29	.012	1,516
	<u>1.0006</u>	<u>\$126,464</u>

Table 12

FIRE PROTECTION NOTES

<u>AREA(S)</u>	<u>COMMENTS</u>
1,2,3	Proposed station #13 would have to be built, move location farther out on West Market Street (new station, 1 pumper, 10 men)
4,5,6,7,8,9, 10,11	Existing station #9 can serve these areas at no additional cost
12,13,14,15, 16,17	Proposed station #12 would have to be built, general proposed location is satisfactory (new station, 1 pumper, 10 men)
18	Proposed station #16 would have to be built, may move location farther out but appears satisfactory now (new station, 1 pumper, 10 men)
19	Existing stations #3 or #7 can serve this area at no additional cost
20,21,22,23	Existing station #7 can serve areas 20, 21 and one-half of 22; existing station #4 can serve one-half of area 22 and area 23; proposed station #15 could be built to serve these areas--low priority at this time (new station, 1 pumper, 10 men)
24,25,26,27	Proposed station #14 would have to be built, location is satisfactory (or existing station #11 serve area 24 and new station serve areas 25,26,27 (new station, 1 pumper, 10 men)
28,29	Existing station #10 can serve these areas at no additional cost

Table 13

FIRE PROTECTION COSTS

<u>AREA</u>	<u>POPULATION FACTOR</u>	<u>OPERATING COST</u>	<u>INITIAL CAPITAL COST</u>	<u>BOND SCHEDULE COST*</u>	<u>DEBT SERVICE REVENUES*</u>
1	.800	\$ 51,376	\$ 28,416	\$10,000	\$18,529
2	.198	12,716	7,033	2,475	12,375
3	.002	128	71	25	30
4	--	--	--	--	137
5	--	--	--	--	1,248
6	--	--	--	--	75
7	--	--	--	--	91
8	--	--	--	--	1,199
9	--	--	--	--	377
10	--	--	--	--	148
11	--	--	--	--	20
12	.015	963	533	188	131
13	.060	3,853	2,131	750	1,103
14	.032	2,055	1,137	400	206
15	.623	40,009	22,129	7,788	6,655
16	.017	1,092	604	213	162
17	.253	16,248	8,989	3,162	758
18	1.000	64,220	35,520	12,500	15,366
19	--	--	--	--	237
20	.130	8,349	4,618	1,625	185
21	.069	4,431	2,451	863	70
22	.801	51,440	28,452	10,013	3,138
23	0	0	0	0	0
24	.355	22,798	12,610	4,438	3,081
25	.068	4,367	2,415	850	462
26	.026	1,670	924	325	1,647
27	.551	35,385	19,572	6,888	3,233
28	--	--	--	--	2,439
29	--	--	--	--	1,032
	varied	\$321,100	\$177,600	\$62,500	\$74,134

*per year for first two or three years

Table 14

STREET COSTS

AREA	MILES* OF		PAVED & DIRT MAINTENANCE COST	RESURFACING COST	PAVING COST	MILES PAVED (NO CURB AND GUTTER)	COST OF ADDING CURB AND GUTTER AND WIDENING
	PAVED	DIRT					
1	12.56	3.78	\$15,163	\$125,600	\$ 74,542	11.73	\$ 697,231
2	1.66	1.99	5,507	16,600	39,243	1.06	63,006
3	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
5	0	.45	1,058	0	8,874	0	0
6	.17	0	85	1,700	0	.17	10,105
7	0	0	0	0	0	0	0
8	.90	0	450	9,000	0	.59	35,070
9	0	.46	1,081	0	9,071	0	0
10	.17	0	85	1,700	0	.17	10,105
11	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0
13	.40	0	200	4,000	0	.40	23,776
14	.40	0	200	4,000	0	.40	23,776
15	3.98	.34	2,790	39,800	6,705	3.98	236,571
16	0	0	0	0	0	0	0
17	.17	2.11	5,045	1,700	41,609	.17	10,105
18	11.69	7.78	24,128	116,900	153,422	11.69	694,854
19	.41	.05	323	4,100	986	.41	24,370
20	0	.53	1,246	0	10,452	0	0
21	.35	.28	833	3,500	5,522	.35	20,804
22	1.55	2.34	6,275	15,500	46,145	1.55	92,132
23	0	0	0	0	0	0	0
24	1.23	.39	1,532	12,300	7,691	1.23	73,111
25	1.27	0	635	12,700	0	1.26	74,894
26	.32	0	160	3,200	0	.32	19,021
27	2.35	1.47	4,630	23,500	28,988	2.35	139,684
28	.36	.59	1,567	3,600	11,635	.36	21,398
29	.11	1.90	4,520	1,100	37,468	.11	6,538
	40.05	24.46	\$77,506	\$400,500	\$482,351	38.30	\$2,276,552

*Does not include mileage of streets assumed to remain under state maintenance.

Table 15

BASIC COST-REVENUE SUMMARY

GENERAL FUND EXPENDITURES AND REVENUES						PROGRAMMED EXPENDITURES			POWELL BILL FUND
AREA	INITIAL CAPITAL COST	ANNUAL OPERATING COST	GENERAL FUND REV. (\$1.06)	GENERAL FUND REV. (NON-PROPERTY)	TOTAL GENERAL FUND REV.	REVOLVING FUND		RESURFACING	P.B. REVENUES
						PAVING	CURB AND GUTTER		
1	\$ 40,112	\$121,354	\$ 93,531	\$18,739	\$112,270	\$ 4,969	\$ 34,862	\$ 8,373	\$ 9,150
2	9,722	31,348	62,464	8,129	70,593	2,616	3,150	1,107	2,044
3	49	131	154	25	179	0	0	0	0
4	70	533	694	137	831	0	0	0	0
5	355	3,092	6,298	1,187	7,485	592	0	0	0
6	85	490	381	89	470	0	505	113	252
7	0	0	461	39	500	0	0	0	95
8	450	3,162	6,052	937	6,989	0	1,753	600	0
9	190	1,934	1,904	296	2,200	605	0	0	504
10	10	157	747	75	822	0	505	113	258
11	0	0	99	8	107	0	0	0	95
12	653	1,410	663	113	776	0	0	0	0
13	2,501	5,631	5,568	935	6,503	0	1,189	267	224
14	1,357	3,194	1,039	476	1,515	0	1,189	267	224
15	25,169	57,135	33,591	5,297	38,888	447	11,828	2,653	2,419
16	699	1,519	817	134	951	0	0	0	0
17	10,194	27,678	3,827	1,285	5,112	2,774	505	113	1,277
18	50,770	163,263	77,562	18,299	95,861	10,228	34,743	7,793	10,903
19	335	2,288	1,197	403	1,600	66	1,218	273	258
20	5,253	12,390	936	465	1,401	697	0	0	297
21	2,786	6,664	356	286	642	368	1,040	233	353
22	31,977	74,484	15,841	3,929	19,770	3,076	4,607	1,033	2,178
23	0	0	0	0	0	0	0	0	0
24	14,820	34,591	15,551	3,172	18,723	513	3,655	820	907
25	2,805	6,938	2,334	489	2,823	0	3,745	847	711
26	1,094	2,513	8,315	809	9,124	0	951	213	179
27	22,222	54,730	16,318	3,742	20,060	1,932	6,984	1,567	2,139
28	1,485	7,801	12,310	2,902	15,212	776	1,070	240	532
29	700	7,549	5,209	879	6,088	2,498	327	73	1,126
	\$225,863	\$633,369	\$374,219	\$73,276	\$447,495	\$32,157	\$113,826	\$26,698	\$36,125

Table 16

WATER AND SEWER COST-REVENUE SUMMARY

AREA	MAJOR LINE COSTS	INITIAL DEVELOPMENT COSTS	DEV. COST ASSESSMENT RETURN	NET CITY DEV. COST	REVENUES FROM SALE OF SERVICE
1	\$ 386,500	\$ 433,500	\$303,450	\$130,050	\$ 57,644
2	102,200	72,500	50,750	21,750	14,628
3	0	0	0	0	65
4	0	3,000	2,100	900	455
5	0	10,500	7,350	3,150	1,423
6	0	1,500	1,050	450	94
7		0	0	0	0
8		12,000	8,400	3,600	2,470
9		4,000	2,800	1,200	780
10		0	0	0	65
11	103,600	0	0	0	0
12	103,400	2,500	1,750	750	325
13	19,500	8,000	5,600	2,400	7,700
14		2,500	1,750	750	1,538
15b	155,200	82,000 (15)	57,400	24,600	14,663
15a					
16		2,500	1,750	750	390
17	145,700	23,000	16,100	6,900	5,797
18a	39,300	482,500 (18)	337,750	144,750	76,048
18b	517,600				
19	246,000	5,500	3,850	1,650	1,950
20		7,000	4,900	2,100	2,535
21		7,000	4,900	2,100	1,317
22a	310,900	58,000 (22)	40,600	17,400	14,443
22b	*				
23	0	0	0	0	0
24	128,200	48,500	33,950	14,550	12,909
25	17,900	7,500	5,250	2,250	1,875
26	45,200	3,500	2,450	1,050	284
27a	112,600	52,000 (27)	36,400	15,600	14,615
27b	22,600				
28		34,000	23,800	10,200	5,284
29	150,200	7,500	5,250	2,250	2,124
	\$2,606,600	\$1,370,500	\$959,350	\$411,150	\$241,421

*Area 22b is impractical to serve at this time and major line costs have not been calculated.

Table 17

COMPARATIVE DATA FOR ADJUSTED AREAS

	AREA BEFORE ADJUSTMENT			AREA AFTER ADJUSTMENT		
	1	2	13	1	2	13
Population	2,965	735	78	2,417	1,283	71
Acres	1,288	705	97	944	1,049	74
Persons/Acre	2.3	1.04	.80	2.56	1.22	.96
% Contiguity	29.2	100	73.9	24.6	89*	71.3

*63.2% when contiguity with Area 1 is not considered; therefore, Area 2 may be annexed with or without Area 1.

Table 18

PROPOSED ANNEXATION SCHEDULE

<u>AREA(S)</u>	<u>INTENT DATE</u>	<u>EFFECTIVE DATE</u>
2,3,4,6,7,8,9, 10,11, part of 12, and 13*	November 18, 1968	June 28, 1969
18*	November 18, 1968	March 1, 1970
24,25,26,27**	March, 1971	June, 1971
28,29**	March, 1972	June, 1972
14,15,16,17**	March, 1973	June, 1973
1**	March, 1974	June, 1974
19,20,21,22,23, and remainder of 12**	after 1975 or as development warrants	

*Definite action proposed

**Tentative schedule

Table 19

DETAILED ACTION SCHEDULE, 1968-1970

AREA (S)	INTENT DATE	HEARING PUBLICATION DATE	APPROVE REPORT	PUBLIC HEARING	PASS ORDINANCE	PUBLISH ORDINANCE	EFFECTIVE DATE
2,3,4,6,7,8,9,10,11, part of 12, and 13	Nov. 18, 1968	Dec. 12,19,26, 1968 Jan. 2, 1969	Dec. 16, 1968	Jan. 6, 1968	Jan. 20, 1969	Jan. 23, 1969	June 28, 1969
18	"	"	"	"	Mar. 3, 1969	Mar. 6, 1969	Mar. 1, 1970

Table 20

SUMMARY SHEET - MAJOR COSTS AND REVENUES**

	68-69	69-70	70-71	71-72	72-73	73-74	74-75	75-76	76-77	77-78	78-79	79-80
Initial Capital Cost	69,419	0	40,941	2,185	37,419	9,514	0	0	6,391	15,300	5,420	2,185
Annual Operating Cost	0	130,934*	227,797	326,567	341,917	432,833	490,833	490,833	490,833	490,833	490,833	490,833
Total General Fund Cost	69,419	130,934*	268,738	328,752	379,336	442,347	490,833	490,833	497,224	506,133	496,253	493,018
Total General Fund Revenues	0	109,382	205,243	266,561	288,549	336,931	440,570	440,570	440,570	440,570	440,570	440,570
Major Line Cost	0	460,400	371,300	326,500	150,200	60,180	67,400	0	0	0	0	0
Development Cost	0	0	136,500	332,500	238,100	76,450	31,750	48,700	37,700	0	0	0
Total Water-Sewer Fund	0	460,400	507,800	659,000	388,300	136,630	99,150	48,700	37,700	0	0	0
Assessment Return	0	0	0	19,040	65,520	102,840	113,740	106,380	102,460	95,940	52,940	16,540
	initial capital cost for Areas 2-13,18	annex Areas 2-13,18		annex Areas 24-27	annex Areas 28,29	annex Areas 14-17	annex Area 1					

* includes estimated \$12,000 for contracts with Rural Fire Districts

** Areas 19,20,21,22,23, and remainder of 12, proposed to be annexed after 1975 or as developer financing of water and sewer service makes annexation feasible, are not included

